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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,899	11/05/2001	Olaf Turner	P01,0332	3107

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EXAMINER	
CHEN, TSE W	
ART UNIT	**PAPER NUMBER**
2116	

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/007,899	TURNER ET AL.	
	Examiner	Art Unit	
	Tse Chen	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-13* is/are rejected.

7)☒ Claim(s) *4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/18/2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on April 18, 2002 was filed before the mailing date of the first Office Action. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

2. Claims 8, 10, and 11 are objected to because of the following informalities:

- As per claim 8, the referenced "claim 6" should be "claim 7" in order to avoid any antecedent problems with respect to "said security module". Accordingly, the Office will proceed with reference "claim 7" in this instant examination.
- As pre claim 10 and 11, the referenced "claim 1" should be "claim 9" in order to avoid any antecedent problems with "said battery compartment" and "said battery compartment cover". Accordingly, the Office will proceed with reference "claim 9" in this instant examination.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan, Jr. et al., U.S. Patent 6594760, hereinafter Ryan, in view of Davies, Jr. et al., U.S. Patent 5283792, hereinafter Davies.

5. In re claim 1, Ryan discloses an electronic device [cryptographic device 10] comprising:

- A security region [enclosed by 34] containing a plurality of security components [20, 22, 24, 26, 28] [fig.4; col.5, l.60 – col.6, l.6; cryptographic process security components].
- A first battery [capacitor C1] disposed in said security region for supplying power to said security components [col.6, ll.35-49].
- A second *power source* [power line 30] disposed outside of said security region [col.6, ll.7-17].
- A battery switchover device [transistor Q1] having a first input connected to said first battery and a second input connected to said second *power source* for switching power supply to said security components [fig.2; col.6, ll.7-17].
- A monitoring unit [processor 20] disposed in said security region and connected to said battery switchover device [col.6, ll.22-49; both embodiments use 20 to switch power source via power control 42].

6. Ryan did not disclose explicitly that the second power source is a battery and that the monitoring unit evaluates the voltage of at least one of the power sources.

7. Davies discloses an electronic device [fig.1] comprising:

- A second battery [backup battery 22] disposed outside of a region [including CPU 10, controller 18, memory 16] for serving as a back-up to a first power source [power supply Vcc] [abstract; col.5, ll.22-53].

- A battery switchover device [switch 24] having a first input connected to said first power source and a second input connected to said second battery for switching power supply to components [memory 16] [fig.2; col.5, l.54 – col.6, l.2].
- A monitoring unit [reset power fail detect 26 and power down control 27] disposed in said region and connected to said battery switchover device for evaluating voltage information [Vcc] associated with at least one of a voltage of said first power source and a voltage of said second battery [col.5, l.54 – col.6, l.2].

8. It would have been obvious to one of ordinary skill in the art, having the teachings of Ryan and Davies before him at the time the invention was made, to modify the system taught by Ryan to include the second battery and monitoring unit taught by Davies, in order to obtain the electronic device comprising a second battery disposed outside of a security region for serving as a back-up to a first battery and a monitoring unit disposed in the security region and connected to a battery switchover device for evaluating voltage information associated with at least one of a voltage of the first battery and a voltage of the second battery. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to protect processing elements in the event of a primary power failure [Davies: col.1, l.14 – col.2, l.8].

9. As to claim 5, Davies discloses the battery switchover device that has an output [Vout] connected to components [memory 16] for supplying power thereto via said battery switchover device from one of said first power source [Vcc] and said second power source [backup battery 22], and wherein said device further comprises, in said security region, decoupling elements [transistors 104, 106] at said output [fig.4; col.5, ll.22-68; col.11, l.57 – col.12, l.17].

10. As to claim 6, Davies discloses the decoupling elements that are selected from the group consisting of diodes [104 or 106] and controlled electronic switches [104 and 106] [col.11, l.57 – col.12, l.17].

11. As to claim 7, Ryan discloses the electronic device comprising a security module containing said monitoring unit and said security components [col.6, ll.4-6; unit and components integrated into a card module].

12. As to claim 8, Ryan discloses the security module that comprises the battery switchover device [col.6, ll.4-6; device, unit and components integrated into a card module].

13. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan and Davies as applied to claim 1 above, and further in view of Wiley et al., U.S. Patent 6073085, hereinafter Wiley.

14. In re claims 2-3, Ryan and Davies disclose each and every limitation of the claim as disclosed above in reference to claim 1. Ryan and Davies did not disclose expressly an analog-to-digital converter for converting voltage information into digital information and the details of the monitoring unit.

15. As to claim 2, Wiley discloses an electronic device [electronic unit 50] comprising:

- A monitoring unit [CPU 111, battery circuit 131, A/D converter 115, etc.] that comprises an analog-to-digital converter [A/D converter 115] for converting said voltage information into digital information [col.5, ll.18-29].

16. It would have been obvious to one of ordinary skill in the art, having the teachings of Wiley, Ryan and Davies before him at the time the invention was made, to use the analog-to-digital converter taught by Wiley with the electronic device disclosed by Ryan and Davies as the

analog-to-digital converter taught by Wiley is a well known component suitable for use with the electronic device of Ryan and Davies. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to monitor the voltage of batteries [col.5, ll.18-29].

17. As to claim 3, Wiley discloses an electronic device [electronic unit 50] comprising:

- The monitoring unit that that comprises a processor [CPU 111] supplied with digital information for evaluating the digital information to generate a signal indicating a supply status [table 1; service errors] representative of voltage information, and an externally visible indicator [display 117 with display processor 116] connected to said processor for receiving said status signal therefrom and for displaying a visual indication of said supply status [col.5, ll.40-54; col.6, ll.29-46; col.8, l.66 – col.9, l.12; col.9, ll.34-57; col.15, ll.53-65].

18. It would have been obvious to one of ordinary skill in the art, having the teachings of Wiley, Ryan and Davies before him at the time the invention was made, to modify the electronic device taught by Ryan and Davies to include the monitoring unit taught by Wiley, in order to obtain the electronic device comprising the monitoring unit that that comprises a processor supplied with digital information for evaluating the digital information to generate a signal indicating a supply status representative of voltage information, and an externally visible indicator connected to said processor for receiving said status signal therefrom and for displaying a visual indication of said supply status. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to ensure an electronic device is in good working order [Wiley: col.1, l.14 – col.2, l.40].

19. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan and Davies as applied to claim 1 above, and further in view of Mori et al., U.S. Patent 5039580, hereinafter Mori.

20. In re claims 9-11, Ryan and Davies disclose each and every limitation of the claim as disclosed above in reference to claim 1. Ryan and Davies did not discuss the details of the housing [Ryan: secure housing 34] or associated parts.

21. Mori discloses an electronic device [appliance; col.7, ll.40-46] comprising:

- As to claim 9, a battery compartment [6] for a second battery [backup battery 7c], closeable with a battery compartment cover [battery mount 20] [fig.2-4; col.7, l.47 – col.9, l.51].
- As to claim 10, a housing [1] containing a region [printed circuit board 2, etc.] and said battery compartment, and having a sidewall [1b] in which said battery compartment cover is disposed [fig.2-4; col.7, l.47 – col.9, l.51].
- As to claim 11, a housing [1] containing a region [printed circuit board 2, etc.] and said battery compartment, and having a base [pocket 21] in which said battery compartment cover is disposed [fig.2-4; col.7, l.47 – col.9, l.51].

22. It would have been obvious to one of ordinary skill in the art, having the teachings of Mori, Ryan and Davies before him at the time the invention was made, to use the housing with the battery compartment and associated cover taught by Mori for the housing disclosed by Ryan and Davies as the housing taught by Mori is a well known housing suitable for use for the electronic device of Ryan and Davies. One of ordinary skill in the art would have been motivated

to make such a combination as it provides a way to safely replace batteries [Mori: col.4, ll.19-39].

23. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan and Davies as applied to claim 1 above, and further in view of Fang et al., U.S. Patent 5128552, hereinafter Fang.

24. In re claim 12, Ryan and Davies disclose each and every limitation of the claim as disclosed above in reference to claim 1. In particular, Ryan discloses the electronic device comprising a plurality of operating components [fig.4; 20, 22, 24, 26, 28] and wherein the monitoring unit includes a processor [processor 20] connected to at least one of said operating components [fig.4].

25. Ryan and Davies did not discuss details of the processing operations.

26. Fang discloses an electronic device [fig.1] comprising:

- A plurality of operating components [component 25; col.5, ll.25-38], and wherein a monitoring unit [25, 16] includes a processor [25d] for evaluating voltage information [col.7, ll.13-31], and wherein said processor is connected to at least one of said operating components and alters operation of said at least one of said operating components if said voltage information indicates an unperformed need to replace a second battery [backup battery 22] [col.6, ll.7-58; col.7, ll.13-31; col.7, l.49 – col.8, l.8].

27. It would have been obvious to one of ordinary skill in the art, having the teachings of Fang, Ryan and Davies before him at the time the invention was made, to modify the electronic device taught by Ryan and Davies to include the monitoring unit taught by Fang, in order to obtain the monitoring unit that includes a processor for evaluating voltage information, and

wherein said processor is connected to at least one of said operating components and alters operation of said at least one of said operating components if said voltage information indicates an unperformed need to replace a second battery. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to conserve battery power [Fang: col.3, ll.1-13; col.4, ll.11-13].

28. As to claim 13, Fang discloses the processor that prevents operation of said at least one operating component after a predetermined delay [T3] if said voltage information indicates an unperformed need to replace said second battery [col.6, ll30-58].

Allowable Subject Matter

29. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

30. The following is a statement of reasons for the indication of allowable subject matter: the claims are allowable because none of the references cited, either alone or in combination, discloses or renders obvious an.electronic device with the arrangement of claim 4.

Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Helms et al., U.S. Patent 5604708, discloses a circuit that monitors the voltage of a backup battery and controls various components accordingly in a predetermined time.

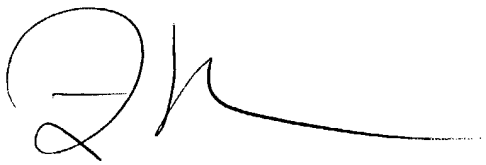
b. Meyer et al., U.S. Patent 5933812, discloses an electronic device with housing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (571) 272-3672. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tse Chen
August 12, 2004



A. ELAMIN
PRIMARY EXAMINER